

## Setting Up MySQL Server and Configuring Remote Access

### 1. Install MySQL Server:

```
sudo apt update
```

```
sudo apt install mysql-server
```

### 2. Access MySQL as Root:

```
sudo mysql -u root
```

### 3. Set Root User Password:

```
ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password BY 'Test@123';
```

```
FLUSH PRIVILEGES;
```

### 4. Create a Database:

```
CREATE DATABASE bankappdb;
```

```
exit;
```

### 5. Modify MySQL Configuration for Remote Access:

- Open the MySQL configuration file:

```
sudo nano /etc/mysql/mysql.conf.d/mysqld.cnf
```

- Locate the line:

```
bind-address = 127.0.0.1
```

- Change it to:

```
bind-address = 0.0.0.0
```

- Save and exit (Ctrl+O, Enter, Ctrl+X).

### 6. Restart MySQL Service:

```
sudo systemctl restart mysql
```

### 7. Verify MySQL is Listening on Port 3306:

```
sudo netstat -tuln | grep 3306
```

### 8. Create a New User with Remote Access:

- Log back into MySQL:

```
sudo mysql -u root -p
```

- Create a new user and grant privileges:

```
CREATE USER 'dev'@'%' IDENTIFIED BY 'dev';
```

```
GRANT ALL PRIVILEGES ON *.* TO 'dev'@'%';
```

```
FLUSH PRIVILEGES;
```

```
exit;
```

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## Accessing the Database via phpMyAdmin

1. Go to [phpMyAdmin Online](#).
  2. Enter the following details:
    - **Host:** Public IP address of the MySQL server.
    - **Username:** dev
    - **Password:** dev
    - **Database:** Leave empty or specify bankappdb.
  3. Connect to manage the database.
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### Important Notes:

- Ensure that the firewall allows incoming traffic on port 3306. For example:

```
sudo ufw allow 3306
```

- It's highly recommended to use strong passwords and secure configurations for production environments.
- Restrict IP access in MySQL if possible to avoid exposing the database to all IPs (%).

This document ensures a functional setup and remote access to your MySQL server for your project.